

Attorney's Docket: 1998CH017  
Serial No.: 09/744,784  
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### REMARKS

The Office Action mailed April 8, 2004, has been carefully considered together with each of the references cited therein. The amendments and remarks presented herein are believed to be fully responsive to the Office Action. The amendments made herein are fully supported by the Application as originally filed. No new matter has been added. Accordingly, reconsideration of the present Application in view of the above amendments and following remarks is respectfully requested.

### Claim Status

Claims 12-31 are pending in this Application. By this Amendment, claims 12 and 27 have been amended, while 32-37 have been added, to more particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Basis for these claim amendments can be found, *inter alia*, on page 4, lines 9 -17; page 7, lines 9-18 and Examples 1-3 on pages 11-12. The claims under consideration are, therefore, believed to include claims 12-37.

### Claim Rejections Under 35 USC § 103(a)

Claims 12-31 stand rejected under 35 USC § 103(a) as being unpatentable over Kayane et al. (US 4,548,612) in view of Yatake (US 5,560,770). This rejection is respectfully overcome.

With respect to independent claim 12, and all claims depending therefrom, Applicant's invention is directed to an aqueous reactive-dye composition which is a solution having at least one reactive dye with certain groups as component (R), biuret as component (B), water, and, optionally, at least one or more formulating additive (F). Importantly, the independent claim also recites that the aqueous reactive-dye composition is storable without substantial deterioration in physical and coloristic properties. As disclosed in the specification, *inter alia*, on page 1, lines 27-29, and page 7, lines 1-18, the present invention overcomes a problem heretofore

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encountered in the industry by providing an aqueous reactive dye composition which is storage stable in aqueous form. As state on page 7, lines 1-5, an important aspect of this invention is the combination of at least one reactive dye and the biuret and, optionally, a further additive (F) which does not decrease the storage stability of the composition. Indeed, the inability to store an aqueous reactive dye composition is discussed by the Kayane reference in column 1, lines 10-17 wherein it is stated:

Reactive dyes are used for dyeing fiber materials usually after having been stored for several days to several months, during which fiber-reactive groups appended to the dye molecule or easy to be hydrolyzed due to water contained in a dye product and air. Therefore, there are often caused troubles such that the reactive dyes are deteriorated in their dyeability, when used for dyeing fiber materials.

Applicants have overcome this problem by the present invention.

In support of its rejection, the Office states in the previous Office Action (mail date October 30, 2003):

Kayane (US '612) teaches an aqueous reactive dye composition comprising a halo-triazine compounds of the formula (2) having  $\beta$ -sulfatoethylsulfonyl and chloro substituent groups.

The Office interprets Kayane to suggest a reactive dye composition in aqueous form as it makes reference to column 17, example 15 in the previous Office Action, and columns 17 and 18, Examples 16-20 of the present Office Action.

The Office contends that Yatake (US '770) teaches a urea derivative such as biuret and comes to the conclusion that "one having ordinary skill in the art would be motivated to modify the primary reference of Kayane by incorporating the biuret component as taught by Yatake to make such a composition with a reasonable expectation of success." Applicants respectfully can not agree.

Kayane, in contrast to the present invention, discloses a reactive dye composition comprising a dye having a formula (I) and a buffer. An examination of Kayane reveals that in no instance does it disclose, teach, or suggest an aqueous solution reactive dye composition, wherein the reactive dye composition is storable

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in an aqueous state. It is clear that the composition taught by Kayane, when stored, is dry, not in an aqueous state, as proffered by the Office.

The Office's attention is courteously directed to column 3, lines 60-65 where Kayane discloses the last step in producing its composition:

The thus prepared mixture maybe dried by means of a spray drier, flash drier, grooved drier, band drier, drum drier, kneading drier and the like. Then the inorganic neutral salts and/or dispersing agents shown above may be added as a diluent. Thus a desired composition can be obtained. (underling added)

This last sentence is critical to an understanding of Kayane as it unequivocally states that the composition is not formed until it is dried. Alternative methods of formation, detailed in column 3, line 66 through column 4, lines 11 all disclose, as a last step, drying the composition.

Furthermore, the examples referenced by the Examiner in support of the position that Kayane discloses an aqueous composition, is in Applicants courteous opinion, misplaced. An examination of Examples 1 through 12 of Kayane (the formulation examples) reveals that the mixture is spray dried to yield the final composition:

Example 1: column 6, line 29  
Example 2: column 7, line 39;  
Example 3, column 8, line 41;  
Example 4, column 9, line 14;  
Example 5, column 9, line 53;  
Example 6, column 10, line 54;  
Example 7, column 11, lines 66 and 67;  
Example 8, column 13, line 28;  
Example 9, column 13, line 50;  
Example 10, column 14, line 52;  
Example 11, column 15, line 67;  
Example 12, column 17, line 17.

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The remaining examples, Examples 13-23 (the application examples), describe use of one of the dry compositions of Examples 1-12 in the formation of a dye bath, printing paste or impregnating liquor and its subsequent application to a substrate. Thus, it is abundantly clear that the dye composition intended for storage by Kayane is not an aqueous solution, but a dry composition.

In order to sustain a *prima facie* case of obviousness, the prior art must teach or suggest all of the limitations of the claimed invention. MPEP § 21413.03. Here, an examination of the cited prior art clearly discloses that neither Kayane or Yatake teach, disclose, or suggest an aqueous solution reactive dye composition which is storable. Indeed, the primary reference teaches away from that claimed by Applicants, as the Kayane reference is directed to dry reactive dye compositions. For this reason alone, it is Applicants' courteous position that the invention is not made obvious by any combination of Kayane and Yatake.

Furthermore, it is beyond contention that a *prima facie* case of obviousness requires the prior art to provide both motivation and a reasonable expectation of success for one with ordinary skill in the art to modify the references in a manner which arrives at the claimed invention. For the Office to establish a *prima facie* case of obviousness over a reference combination, it is incumbent upon the Office to show that the references themselves provide some teaching whereby an applicant's invention would have been obvious to an artisan of ordinary skill. Importantly, "the mere fact that references can be combined or modified does not render the resulting combination obvious unless the prior art also suggests desirability of the combination". MPEP § 2143.01. Thus, the inquiry is not whether each element existed in the prior art, but whether the prior art made obvious the invention as a whole for which patentability is claimed.

It is Applicants' respectful assertion that the prior art fails to provide the requisite motivation. There is nothing in the disclosure of Kayane or Yatake which would motivate an artisan of ordinary skill to make the combination as proposed by the Office. One with ordinary skill, attempting to overcome the problem of unstable

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aqueous reactive dye compositions, would not be motivated to import the biuret, as taught by Yatake, in the dry composition as taught by Kayane. Assuming, *arguendo*, that one with ordinary skill in the art would be motivated to employ the teachings of Kayane and Yatake in an attempt to generate a storable aqueous solution reactive dye composition, there is nothing in either reference which would suggest that placement of biuret in the composition of Kayane would yield a storable aqueous solution reactive dye composition. Simply put, the references are completely silent as to the combination of a reactive dye and biuret being able to produce a storage stable aqueous solution reactive dye composition. Silence of the prior art with regard to storage stable aqueous compositions becomes apparent when it is realized that Kayane specifically discloses that its composition must be dried before it can be stored. Therefore, one with ordinary skill in the art having a knowledge of these references would find no motivation to place the biuret from Yatake in the composition of Kayane and yield Applicants' claimed invention. In consequence, Applicants contend that any motivation for one with ordinary skill in the art to make the combination as proposed by the Office is the result of impermissible hindsight gained by a knowledge of Applicants' disclosure.

Moreover, obviousness does not lie against the claimed invention because the prior art fails to provide a reasonable expectation success for the Office's proposed combination. Assuming, *arguendo*, one with ordinary skill in the art would contemplate alteration of Kayane by using the biuret of Yatake, such artisan could not, absent a knowledge of Applicants' disclosure, have any reasonable expectation of success that such combination would yield a storable aqueous reactive dye composition. The ordinary artisan would not have the luxury of enjoying a reasonable expectation of success as Kayane requires the composition to be dried. Therefore, unless the artisan is to abandon the express teachings of Kayane, such artisan could not, absent impermissible hindsight, have any reasonable expectation of success that the combination as claimed would yield a storage stable aqueous solution composition.

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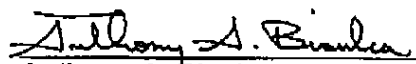
Turning to Independent claim 27, and dependent claim 37, Applicants have specified the optional formulation additives. As neither Kayane or Yatake, alone or in combination, disclose the combination of constituents recited in claim 27, it is respectfully contended that claim 27, and its dependent claim, are not made obvious thereby.

For all the forgoing reasons, it is Applicants' contention that the claimed invention is not made obvious by any combination of Kayane and Yatake. Applicants, therefore, courteously solicit reconsideration and withdrawal of the rejection.

As the total number of claims does not exceed the number of claims originally paid for, no fee is believed due. However, if an additional fee is required, the Commissioner is hereby authorized to credit any overpayment or charge any fee deficiency to Deposit Account No. 03-2060.

In view of the forgoing amendments and remarks, the present Application is believed to be in condition for allowance, and reconsideration of it is requested. If the Examiner disagrees, she is requested to contact the attorney for Applicants at the telephone number provided below.

Respectfully submitted,

  
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